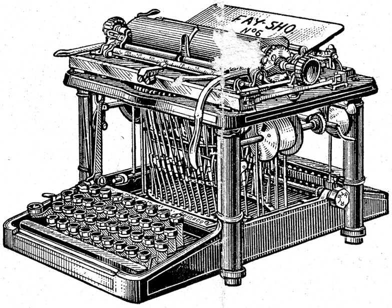
SPEED WRITING, TELEGRAPH WORK, BILLING, TABULATING, CARD WRITING, ETC.

BY

C. H. McGURRIN, SPEED CHAMPION
F. M. McCLINTIC,
H. V. EMANUEL, } TELEGRAPH CHAMPIONS

AND OTHER EXPERTS UPON THE

FAY-SHOLES



TYPEWRITER

COMPLIMENTS OF

FAY-SHOLES COMPANY

CHICAGO

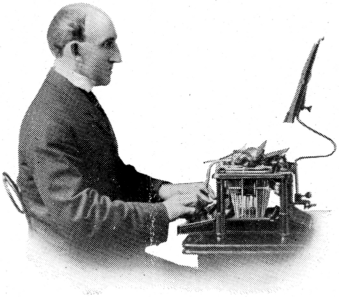
C. N. FAY, PRESIDENT   FRANKLIN REMINGTON, VICE PRESIDENT   C. B. PRICE, TREASURER

DIRECTORS
JAS. H. ECKELS   C. NORMAN FAY   FRANKLIN H. HEAD   BRYAN LATHROP   FRANKLIN MAC VEAGH
SAMUEL MATHER   FRANKLIN REMINGTON   W. E. STONE   A. D. WHEELER

CHARLES H. McGURRIN

OF KALAMAZOO, MICH.

COURT REPORTER AND UNITED STATES COMMISSIONER



TYPEWRITER SPEED CHAMPION OF THE WORLD

SPEED WRITING.

By CHAS. H. McGURRIN.

It may be said that two sets of qualifications are essential to operating the typewriter rapidly: One for the individual and one for the machine.

In the first place, an operator is fortunate if he possesses the right kind of a nervous organization. Intense nervous force, however, is of but little value unless capable of being controlled. With such a force properly controlled, tempered with a generous supply of ambition, one can accomplish almost anything under the sun, the mastery of the typewriter included. I do not mean to say that no one but an intensely nervous person can make a rapid operator; but I believe there is a decided advantage in possessing such a temperament. The mind of such a person is quick and active, and better calculated accurately to retain lengthy sentences; to supply words indistinctly pronounced and even to anticipate, by context, what is about to follow, all of which is of unlimited value in the work of taking dictation. It is necessary but to contrast a person with these qualifications with one who continually asks for repetition when taking dictation or direct work on the machine, to appreciate their value.

Granted the proper temperament, the first requisite is the best machine that can be bought. I personally prefer the **Fay-Sholes,** which I am now using, because of its single shift keyboard, easy action, and comparative noiselessness. It is capable of any required speed, with the lightest tensions known to the trade, and **light tensions mean the most work with the least fatigue and the smallest strain upon the nervous organization.** I further believe in the use of the so-called "blind-writers" in preference to the "visible-writers" for fast and accurate work. The first requisite for great speed is to educate the eye and the mind so as to free both from watching the keyboard or the work in hand, so that both may keep well ahead in reading copy or taking dictation, thus anticipating the action of the hands, which should become almost automatic. A high grade operator very seldom looks at his work and cares little for visible writing unless engaged in filling blanks, miscellaneous tabulating, and the like, which is necessarily *slow* work under any circumstances. Visible writing cannot compensate *him* for the advantages of speed, power, wear and versatility possessed by the older type of machine. A "speed," or *reversed*, escapement should be used and "speed touch" cultivated, for the reason that the carriage, escaping at about the last third of the down stroke of the key instead of on the first third of the up stroke, has just that much longer to space between letters, the margin tending greatly to offset the drag caused by irregularity of touch. Finally, the machine should be kept perfectly clean, and the tensions of the main spring, the key levers, the escapement and the loose dog should be carefully balanced and the universal bar accurately set with reference to the individual touch of the operator.

After the machine is just right, speed depends mainly upon lightness and evenness of touch. No matter how fast or how perfectly adjusted the machine, it will not produce uniform looking work if operated with uneven or hanging touch. On the contrary, the finer the condition and adjustment of the machine, the more faithfully will it reflect in its work the least irregularity on the part of the operator.

This is because the paper carriage is moved by the main spring, while the escapement which allows it to move is actuated by several different and independent powers, namely, the fingers. The paper carriage *must* space an equal distance, usually one-tenth of an inch, for each stroke of a key, and being actuated by the same spring, tends to move each space at the same speed. If now the escapement vibrates also with perfect uniformity both in time and depth, so that the dogs allow the carriage an equal time in which to make each equal space, the carriage will slip steadily along with hardly perceptible vibration, the dogs will play swiftly and cleanly through the rack without catch or friction, the type bars will come up against the platen and drop out of each other's way without colliding, and, most important of all, the type will strike at even distances and with an even impression, giving clear and beautiful work, the *faster the better*. On the other hand, irregularity in the time of escapement caused by uneven strokes or by hanging on the keys after striking them gives the paper carriage unequal times for equal spaces, with the following bad results : The dogs tend to catch on the rack teeth instead of passing clearly through them and both are blunted; the carriage to get out of its stride, first dragging and then shooting ahead; the type bars to collide; the letters to crowd or skip and the work to show spotty and uneven. In order to force the carriage up to speed under an irregular escapement, the main spring tension must be raised. This makes extra friction on the dogs, and the escapement tension must next be raised to overcome it. This makes the touch hard and fatiguing, increases the shock and noise of the machine, and makes it wear out; but it will *not* give very high speed. Low tensions and perfect touch alone can give it. Do not forget this.

Perfect touch consists in striking the keys with *even* weight, in *even* time and taking the fingers off *instantly*. Touch them as you would a red hot stove, taking the fingers away as if the keys burnt you. This lets the key levers rise and frees the universal bar, so that the escapement can *complete its up stroke* before the next key brings it down again, and allows the upper dog to clear the rack so that it can escape freely. Nothing but the perfect touch will *invariably* give this clearance.

As a means of acquiring the quick, even touch, I would suggest the particular practice of striking two keys, one at either end of the keyboard, increasing in rapidity until a good, clearly defined, evenly struck letter is made at a speed of five and a half or six seconds for the full line of seventy-five characters. Practice on a single word, or two words, written in the same way, is also beneficial to acquiring the proper touch.

The *manner* of operating is always an important factor in securing rapid work. One should make a determined effort to use all of the fingers in operating. Assign to each finger its own territory and let it operate in that territory long enough to demonstrate its ability to get the results desired. If, after a thorough trial, it should be found that the small finger of either hand is not a valuable workman, assign its territory to the third finger, and then apportion the remaining work among the other fingers.

The SMALL FINGER OF THE LEFT HAND should invariably be used for depressing the shift key. The presence of a second shift key on any machine should be forgotten, as it is of no earthly value.

The position of the hands over the keyboard is an important consideration in rapid operating. The hands should not be held too far above the keys, in order that as little time be consumed in contact as possible. By holding the hands in an unnecessarily elevated position there is a liability to produce uneven strokes, and consequently irregular looking work. By holding the hands in an easy position just above the keys, then directing the fingers to their respective territory, applying the adequate and proper force to the fingers, which force is directed by the forearm and hand, one is enabled to secure a quick, even touch, and this is absolutely indispensable to good and rapid work.

The space bar should be touched with the THUMB OF THE RIGHT HAND, turned outward. This applies to machines of all kinds. The purpose of using always the same fingers for depressing the shift key and touching the space bar is, that the work of operating shall become more or less automatic, and especially does this apply to these two locations; hence the advisability of making it just as simple as possible, at the same time avoiding confusion, which surely would follow if either thumb or more than one particular finger were detailed to perform these important functions.

To practice writing by "touch," I would recommend the writing and rewriting of a word, and then a combination of words, first looking directly above the center of the keyboard about four inches, which may be designated as position number one. After one is easy in this position, then elevate the eyes to the vicinity of the front scale, and it will be found that this position will be much easier than the first. Go to the third position then by elevating the eyes to a point three or four inches above the center of the platen, and when this position is acquired, touch writing will be found quite free from difficulty. This practice should be well regulated, consistent and determined, with a view not so much to speed on the start as to the acquiring of the location of the keys and the proper touch.

I have been asked to say something about my own methods and achievements. When first developing speed, it was my custom to devote a certain portion of the day to the particular practice of writing and rewriting certain words and combinations of letters over and over again until the fingers became so familiar with them that they would, unaided, write this familiar matter mechanically and at the same time very rapidly. This in connection with actual work was what I relied upon for increasing my speed. I always preferred the actual work to anything else, for when engaged in it there was the feeling of greater responsibility as to accuracy than in mere practice, and this was always advantageous. Among some of my most satisfactory performances on the machine were, one occasion when I undertook to write in three hours fifty full pages of court proceedings, each page to contain upward of 300 words. When the last page of the fifty was completed I had a minute and a half to spare. On counting some of the pages and taking an average it was found that I had written on an average of about 106 words per minute. On another occasion at Lansing, I wrote from dictation by one of the official reporters of the proceedings for that session, an average of seventeen full pages of debate for two and one-half hours, each page containing upward of three and one-quarter folios. On several occasions when taking the testimony of witnesses direct on the machine I have written as high as 115 words per minute on testimony. On several occasions in giving public exhibitions in writing a memorized sentence I have written it at from 160 to 200 words per minute, the highest being 212 which was done at Dublin, Ireland, before a carefully selected committee and an immense audience.

This performance was several years ago, when I was giving speed exhibitions, and was in training for speed. It was at the rate of thirteen and three-tenths letters and spaces per second for one minute. I have not trained for speed lately, but I have run the **Fay-Sholes** machine repeatedly across the line striking the letters "a" and "p" in four and three-quarter seconds, equal for the seventy-five characters to over fifteen and seven-tenths letters *without spaces* per second. I do not attach very great importance, however, to these short spurts of extraordinary speed, though they prove what the hand and the machine will do. The real test is that of actual work continued during several hours, in which I have accomplished more upon this machine than upon any other.

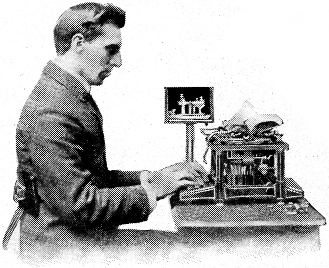
KALAMAZOO, MICH., Oct. 15, 1901. C. H. McGURRIN.

F. M. McCLINTIC

OF

ASSOCIATED PRESS

DALLAS, TEXAS



SECOND AMERICAN TELEGRAPHERS' TOURNAMENT
ATLANTA, GA., MARCH 1, 1902

Winner of Championship Code Class, and first prize for all around work receiving and sending ten minutes, cleanest and prettiest copy. Record 517 words.

Also winner of Andrew Carnegie Gold Medal and the *Atlanta Journal*, and *Atlanta Constitution* Gold Medals.

FAY-SHOLES MACHINE USED BY MR. McCLINTIC

NOTE.—Mr. W. C. Murray, of the Associated Press, Dallas, captured second prize in the Phillips' Code Class. This gentleman had brought his own Remington Standard machine but just before the Code Class Contest was pulled off, he asked permission to use the FAY-SHOLES, as his own machine broke down. He made the statement to some of his fellow operators that he did not believe his performance would be creditable; nevertheless, he was awarded second place, and his work on the FAY-SHOLES, under the circumstances, is certainly remarkable. He became so enthusiastic over our No. 6 machine that he will use one in his regular work hereafter.

THE TYPEWRITER IN TELEGRAPHY.

BY F. M. McCLINTIC

Since the typewriter and the telegraph have become inseparable for high speed and accurate, clean work, telegraphers, as a rule, have made a study of the qualifications necessary to attain the highest proficiency with the typewriter. The code which is used very freely in press work, and to a considerable extent in commercial business, makes it necessary for telegraphers to attain a speed of not less than seventy-five to one hundred words per minute. They do not work at this speed at all times, but the speed is necessary because the code comes in lumps. For instance, a sentence reading "The President to-day sent to the Senate the following nominations," is coded "T Pr tdy snt to t Sa tf nmns." It takes less than ten seconds to send the coded words on a wire, and ordinary speed for a line of newspaper matter received on a typewriter on a sixty-five scale machine is fifteen seconds. When several lines of matter, the words of which can nearly all be coded, are sent consecutively, if the telegrapher becomes excited and tries to increase his speed with the code which is coming, he frequently makes a mess of it all and has to "break." An entire confidence in the machine used, a good, steady, even speed on the typewriter and freedom from the fear that one may get too far behind the sender and forget what has been sent, is necessary for average good work.

The easy touch of the Fay-Sholes and the confidence it inspires, especially in the paper feed, makes it invaluable to me in my work. It is a confidence akin to the knowledge that you have a sure footed horse beneath you in riding over the mountains.

For best results the typewriter should be worked at the lowest tension, without being "sloppy," and piling. If the operator will practice a steady, even touch, he will find his machine can be worked with a remarkably easy tension without trouble. He should feed his blanks in one behind the other. There is usually time to do this as you go along without "breaking."

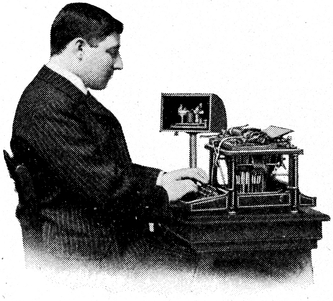
A total abstinence from strong drink of any kind, tea and coffee included, will add strength and endurance to the ability of any telegrapher.

F. M. McCLINTIC.

Dallas, Tex., May 15, 1902.

HARRY V. EMANUEL

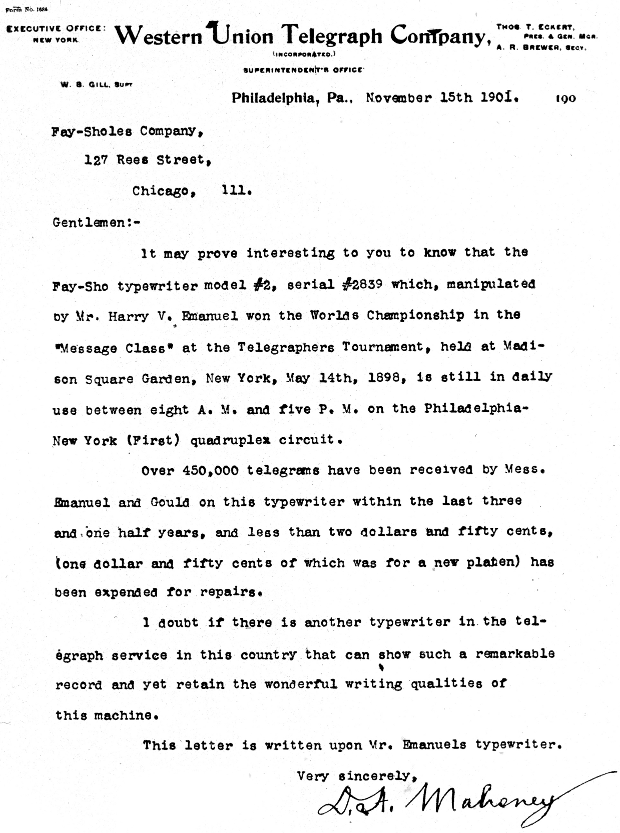
OF W. U. T. CO.
PHILADELPHIA, PA.



Winner of Championship Message Receiving Class, First American Telegraphers' Tournament, Madison Square Garden, New York, May 14, 1898. Record, fifty complete messages without error, averaging fifteen words each, in thirty-two minutes.

Winner of Championship (Gold Medal) Message Receiving Class, Second American Telegraphers' Tournament, at Atlanta, March 1, 1902. Record, fifty and one-half messages in thirty minutes.

FAY-SHOLES MACHINE USED ON BOTH OCCASIONS



Form No. 1686

EXECUTIVE OFFICE:
NEW YORK.

Western Union Telegraph Company,
(INCORPORATED.)

THOS. T. ECKERT,
PRES. & GEN. MGR.
A. R. BREWER, SECY.

SUPERINTENDENT'S OFFICE

W. B. GILL, SUPT.

Philadelphia, Pa., November 15th 1901. 190

Fay-Sholes Company,
127 Rees Street,
Chicago, Ill.

Gentlemen:-

It may prove interesting to you to know that the Fay-Sho typewriter model #2, serial #2839 which, manipulated by Mr. Harry V. Emanuel won the Worlds Championship in the "Message Class" at the Telegraphers Tournament, held at Madison Square Garden, New York, May 14th, 1898, is still in daily use between eight A. M. and five P. M. on the Philadelphia-New York (First) quadruplex circuit.

Over 450,000 telegrams have been received by Mess. Emanuel and Gould on this typewriter within the last three and one half years, and less than two dollars and fifty cents, (one dollar and fifty cents of which was for a new platen) has been expended for repairs.

I doubt if there is another typewriter in the telegraph service in this country that can show such a remarkable record and yet retain the wonderful writing qualities of this machine.

This letter is written upon Mr. Emanuels typewriter.

Very sincerely,
D. A. Mahoney

OTHER SPEED RECORDS HELD BY THE FAY-SHOLES (FORMERLY "——SHO") MACHINE.

Telegraphers' Tournament, Madison Square Garden, New York, May 14, 1898. Harry V. Emanuel won first prize with **Fay-Sholes** machine in competition with ten Remingtons, six Smith Premiers, five Densmores, four Caligraphs and others, receiving and typewriting without error fifty complete telegraph messages, average fifteen words each, in thirty-two minutes.

Syndicat Général des Sténographes and des Dactylographes, Eleventh Annual Competition, Paris, April 30, 1899. Felix Huysmans using **Fay-Sholes,** won first prize for speed and perfection in competition with Remington, Smith Premier, Yost and all other machines entered.

First European Typewriter Exposition, Hamburg, August 29, 1900. Miss Helena Rudel won first prize in speed competition, using **Fay-Sholes** machine against all others exhibited.

Civil Service Commissioners' Examination, Milwaukee, February, 1901. James Carney won competition for speed and accuracy, using **Fay-Sholes** machine against five other makes.

BILLING.

Billing with the typewriter is usually done for the purpose of taking carbon copies of bills at the time they are made. For *single* copies billing with the machine is not much faster than billing with the pen, if as fast; but in modern accounting, where the carbon copies of the bills are substituted for pen entries in sales journal and ledger, and in railroad way-billing and expense-billing, where many copies are needed, an immense saving of time, labor and error results from using the machine, together with a great gain in legibility. Billing with the typewriter must therefore be considered mainly with reference to carbon work, and the following suggestions, drawn from our experience, are offered:

Blanks. Unruled blanks should be used. Ruled blanks usually place important figure columns at the extreme right and left edges of the blank; consequently they are apt to come under the paper fingers on each end of the platen, and part of the columns cannot be printed and the type batter against the paper fingers. The unruled blank avoids this difficulty, also all difficulty as to line spacing. The line spacing on the printed heading of the bill should correspond with the spacing gauge of the machine, so that when the bill is dropped into the machine the operator can feed it forward with a certain known number of movements of the spacing lever, to the proper printing line, without wasting time to find the place.

Paper, Ribbons, Etc. The paper should not be too stiff or heavy, nor too transparent, but the right weight for the number of carbons required. The ribbon should be preferably "Black Record," unless press copies are desired; but press copying is to be advised against because, first, copying requires an extra operation, losing time; second, it requires more care than can be counted on in everyday practice to prevent blurring of overwet copies and confusion of figures like 3 with 8, 6 with 9, etc. Wet copies should only be used for numerous tissues running up to ten or more copies. For such work a single original may be printed upon very thin paper with a very rich violet copying ribbon, and this original may be laid in a press with five or more damp tissues on each side of it, which should lie under pressure until the copying ink soaks both ways through them all. This process is slow, but when well done is effective.

The General Manifolding Company makes a graphite paper intended for invoicing, waybilling, mani-billing, etc., and makes a specialty, we believe, of designing and printing complete forms coated with graphite on the back, which are stated to be very handy for quick work, as no carbon need be handled, the back of one form serving as carbon sheet for the face of the next. These blanks are said to make a great saving in time.

Type. The type should vary according to the use for which the machine is intended. For general work "Pica" is most commonly used. For *billing only* the machine does not need both capitals and small letters, or very many of the punctuation and expression marks; and it is generally hard driven for many hours each day, making simplicity and strength very important. For these reasons it pays to leave out the shift and fit the machine with single type (capital letters only, usually "Gothic") and with special numerals, such that 3 and 5, 6 and 9, etc., may not be mistaken for each other, even in the tenth carbon or press copy.

For large blanks, or where great concentration is required, "Elite" type can be used. It is open to the objection that ribbons fill it rapidly, especially hektograph ribbons. Some friends of ours have recently noticed that the Underwood copying ribbon does beautiful hektograph work and gives a large number of copies, while at the same time it does not fill the type rapidly. We believe the use of the "Elite" type for large blanks can be recommended in conjunction with this ribbon.

Many buyers of billing machines ask for compound type carrying abbreviations such as "Bbl." for barrel, "F. O. B." for free on board, and the like. These we unhesitatingly condemn, although we furnish them if required. They are supposed to save time, requiring but one stroke for each abbreviation; but as each occupies at least two letter spaces, the spacing bar must be struck twice after each to prevent crowding upon the next word, and saving of time (which occurs only when that particular abbreviation is wanted, perhaps once or twice on a long bill) is imaginary rather than real, for the most part. Against this saving count heavily the following disadvantages: Broad-faced and clumsy type, which crowd the basket and cause collision between neighboring type bars; by their weight make the touch uneven and reduce the speed; and on account of their breadth print faintly in comparison with the narrower characters in the same line, such for instance as the figure 1, period, etc. Furthermore, if all the keys were to carry abbreviations, it is plain that nothing else could be printed, and the machine would be incapable of general work; that is to say, *the more numerous the abbreviations* the *less useful the machine.*

Long Carriages. If ruled forms are used for commercial billing, which we advise against, it is better to use a carriage capable of printing a nine inch (ninety point) line instead of the usual seven and one-half inch (seventy-five point) line, for the reason that most billheads are at least eight and one-quarter inches wide and the columns go clear across them, making it impossible to print in the extreme right-hand column for the reason given above. If blanks of extraordinary width are used, it becomes still more necessary to provide additional room upon the carriage. With the **Fay-Sholes** typewriter can be furnished any or all of four standard lengths of carriages, printing respectively seven and one-half inch, nine inch, twelve and one-half inch and sixteen and one-half inch lines, and taking paper one and seven-eighths inches wider than the length of the line in each case. We recently built a huge special carriage for the United States Steel Corporation, printing a twenty-four inch line, which does beautiful work.

When very many carbon copies are to be made, the rubber shell of the platen should be *hard*, and it is also an advantage to reduce its diameter slightly. With the **Fay-Sholes** machine can be furnished an *extra platen hardened and ground smaller for manifolding*, instantly interchangeable with the regular platen.

Tabulating. The **Fay-Sholes** typewriter is fitted with a tabulator (tabulating to the column point) as a regular part of the machine, no charge being made for it. With each machine are furnished a number of tabulator stops which may be set as riders on the front scale rod, directly corresponding to the printing points chosen to mark the left line of each column. The construction tabulates to the column line, but not to the decimal place, which must be reached for each number printed by striking the space bar times enough to move the carriage from the left column-line to the units, tens, or other place required. This is a slight disadvantage, and causes loss of time when tabulating *widely varying amounts* in the same column. In actual practice, however, it is found that amounts in the same column usually vary *not more than one or two decimal places;* so that by setting the column stop upon the higher decimal place, or even one place to the left of it, it is seldom necessary to strike the spacing bar more than once in order to reach the printing point; an action which soon becomes automatic, and very rapid. As against this slight disadvantage, are the very positive *advan-*

tages of doing away with expensive and cumbrous attachments to the machine, which increase its weight, load up its tensions, and require their own repairs; also the equally great advantage of controlling the jump of the carriage, while tabulating, with the right hand, so as to break the shock and protect the whole machine from rack and wear.

Merely *taking the riders off the scale* reduces the machine at once to ordinary correspondence construction, without a superfluous part, or ounce of weight, or dollar of extra price. The operation of the tabulator is so simple as not to require detailed description.

Spacing and Arrangement of Commercial Bills. We subjoin a sample of spacing arrangement as practiced by Mr. E. C. Ennis in the employment of Armour & Co., for the past three years, which, in his judgment, permits of the neatest and best work. No punctuation is used, which is a great saving of time on a full day's billing; the decimal point need only be used when the total amount of an item is under $1 and should be placed in advance of the figures representing cents, merely for the sake of certainty.

This sample is divided into five columns; first, on the left hand at 0 comes the number and description of packages; then at about point 16 the description of the goods; then at about point 37 the weights or quantities; then, at point 45 for the unit place, comes the price; at point 55 comes the unit place for extensions, and at point 64 the unit place for the totals. This is for billing with an ordinary 75-point carriage on unruled blanks.

Where the number of pieces is to be stated (as in some items on the sample bill) the best place to show them is right before the description of the goods.

SAMPLE BILL

Oct 16 1901

W P Bird & Co
Bedford Ind

FOLIO NO.
476

TERMS:
Ten days

1 Bx		Pork Saus	10	7½	75	
1 Tce		Shield Lard	332	12	39 84	
1 Bbl		Pig Pork		20 00	20 00	
1 c	24-2	Corn Beef	2Doz	2 25	4 50	
	2	Hams	25	11	2 75	
1 Bx	3	Bqt Bacon	15	12	1 80	69 64

ROUTING:
CI&L

NOTE.—THE FOREGOING IS NOT INTENDED TO BE A FACSIMILE OF TYPEWRITTEN WORK.

CARD WRITING.

The increased use of card catalogues has created a new use for the typewriter, consisting of filling out the Detail and Guide Cards used in card catalogues, such as furnished by the Rockwell & Rupel Co., Macey Co., Library Bureau and others. These cards are very difficult to handle upon machines using a cylindrical platen, on account of their stiffness, and also because the upper edges of the Guide Cards are furnished with projections of varying height and width, which rise above the general mass of cards in the card drawers, to display index letters and the names of groups or classifications. To hold these projections close to the platen at the printing point, so as to permit of good typewritten work upon them clear to their topmost edges, has proved to be a very difficult matter. The Fay-Sholes Company has devised a cardholder guiding the card from its *bottom* edge (which is always straight), which gives better results in this particular use than any other yet placed upon the market, and is capable of handling cards up to five and one-half inches in height and nine inches in width. Enough space (say one-fourth inch) must be reserved on the right and left edges of the card to afford a sure hold for the paper fingers, but the card may be written upon to its extreme top and to within three-eighths of an inch of its bottom. After it comes out of the machine the curve given to it by the platen may be straightened out by reversing it and running it into the machine a second time.

Detail Cards may be written to great advantage, both for speed and good work, by using the cardboard in strips the length of several cards, feeding it through the machine continuously and cutting up the strips afterward into cards of proper height. The strip should bear the crossrulings or printing needed for so many cards, and guide marks where it must be chopped off. This method can be used to advantage only for Detail Cards, not for Guide Cards, because of difficulty of cutting off caused by the projecting lips above mentioned.

LOOSE LEAF LEDGER SYSTEMS.

The **Fay-Sholes** machine is especially adapted for use in connection with Baker-Vawter and like loose leaf ledger systems, on account of the construction of its paper feed, which will feed their blanks without catching.

WE CAN FILL ORDERS FOR

McGurrin Treatise on Touch Writing, ...	Price,	$1.00
McGurrin Copyholder, ...	“	2.00

Cash to accompany order.

PRINTERS
P.S.Co.
Chicago